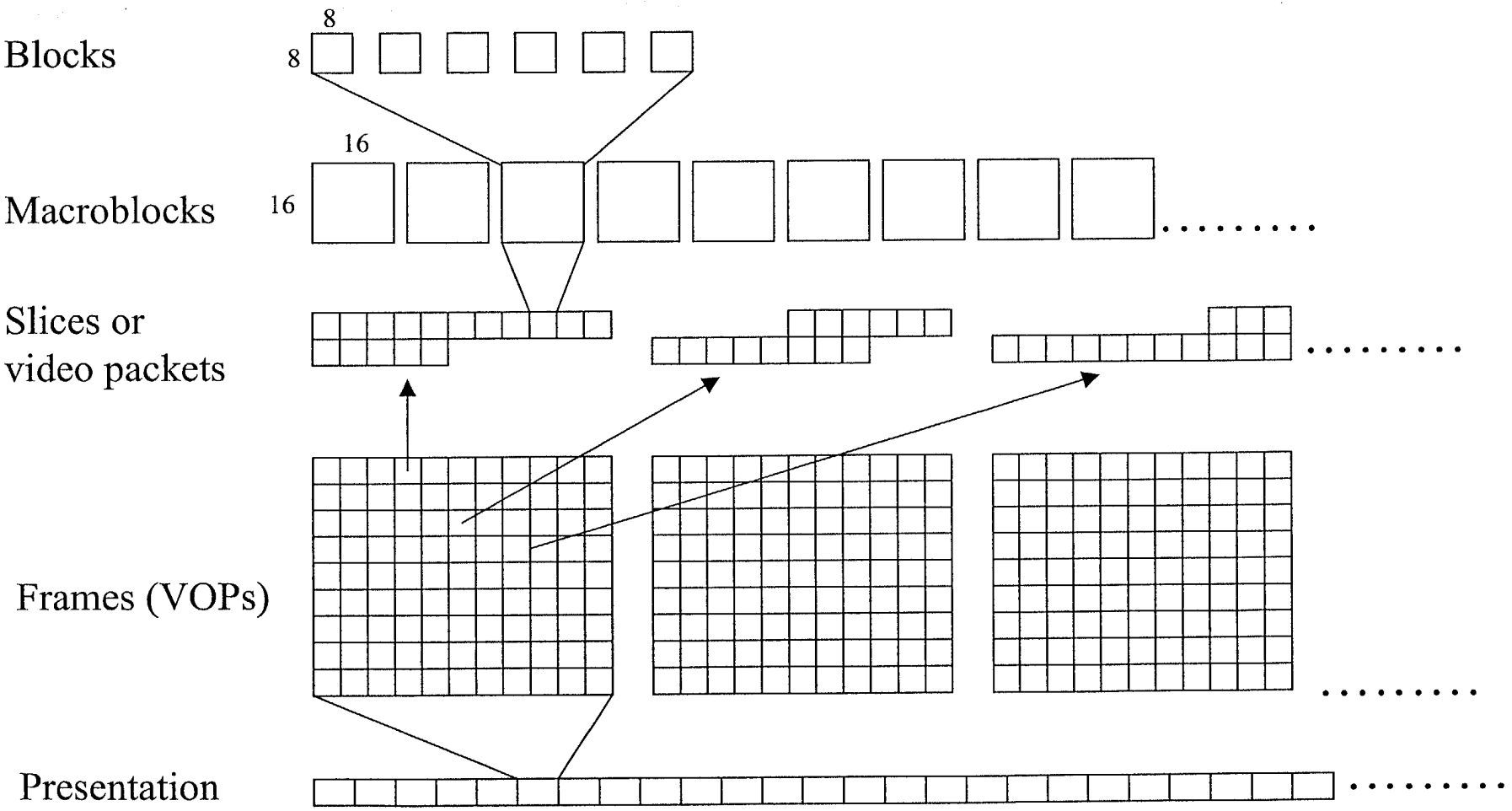

Blocks
8
8
Macroblocks
16
16
Slices or
video packets
Frames (VOPs)
Presentation

Partial table with one 8-entry indexing subset:

Index	Index Bits	Codeword	MV Value
0	000	1	0
1	001	011	-0.5
		010	0.5
2	010	0011	-1
		0010	1
3	011	0001 1	-1.5
		0001 0	1.5
4	100	0000 111	-2
		0000 110	2
5	101	0000 1011	-2.5
		0000 1010	2.5
6	110	0000 1001	-3
		0000 1000	3
7	111	0000 0111	-3.5
		0000 0110	3.5
N/A	N/A	0000 0101 11	-4
		0000 0101 10	4
N/A	N/A	0000 0101 01	-4.5
		0000 0101 00	4.5
Etc...	Etc...	0000 0100 11	-5
		0000 0100 10	5

FIG. 2A

Partial table with one 32-entry indexing set:

Index	Index Bits	Codeword	MV Value
0	00000	1	0
1	00001	011	-0.5
		010	0.5
2	00010	0011	-1
		0010	1
3	00011	0001 1	-1.5
		0001 0	1.5
4	00100	0000 111	-2
		0000 110	2
5	00101	0000 1011	-2.5
		0000 1010	2.5
6	00110	0000 1001	-3
		0000 1000	3
7	00111	0000 0111	-3.5
		0000 0110	3.5
...	...	...	...
		...	...
30	11110	0000 0000 0101	-15
		0000 0000 0100	15
31	11111	0000 0000 0011 1	-15.5
		0000 0000 0011 0	15.5
N/A	N/A	0000 0000 0010 1	-16
N/A	N/A	0000 0000 0010 0	16

FIG. 2B

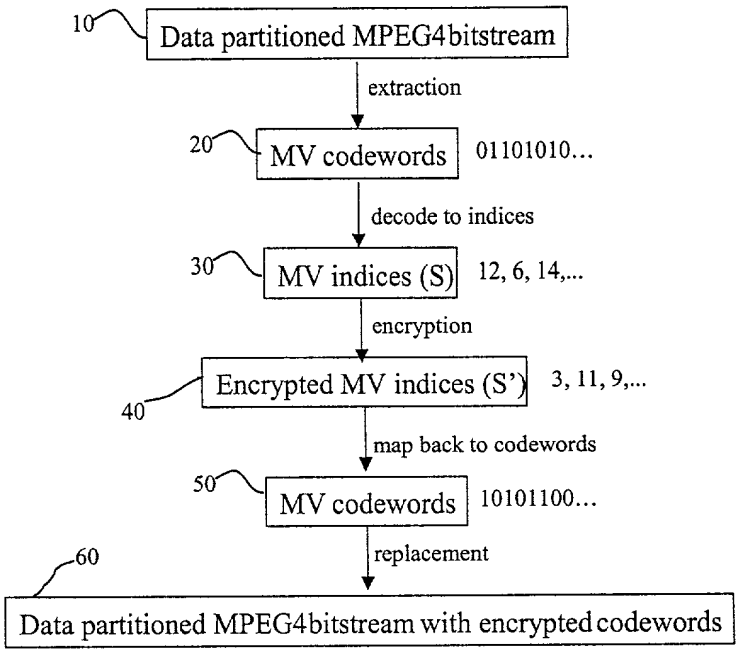

10
Data partitioned MPEG4bitstream
extraction
20
MV codewords
01101010...
decode to indices
30
MV indices (S)
12, 6, 14,...
encryption
40
Encrypted MV indices (S')
3, 11, 9,...
map back to codewords
50
MV codewords
10101100...
replacement
60
Data partitioned MPEG4bitstream with encrypted codewords

FIG. 3

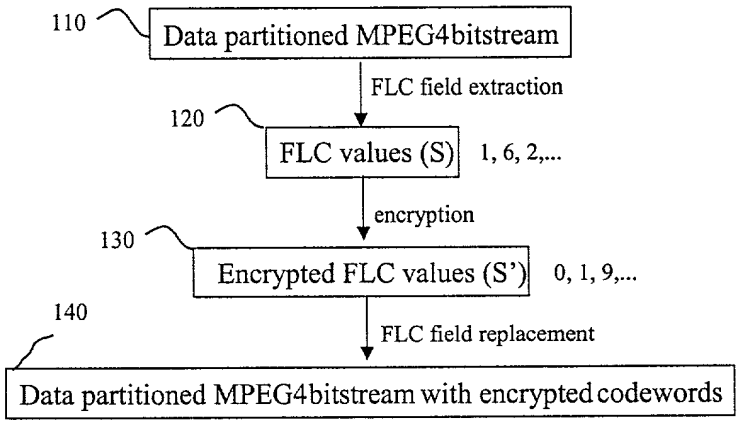

110
Data partitioned MPEG4bitstream
FLC field extraction
120
FLC values (S)
1, 6, 2,...
encryption
130
Encrypted FLC values (S')
0, 1, 9,...
140
FLC field replacement
Data partitioned MPEG4bitstream with encrypted codewords

FIG. 5

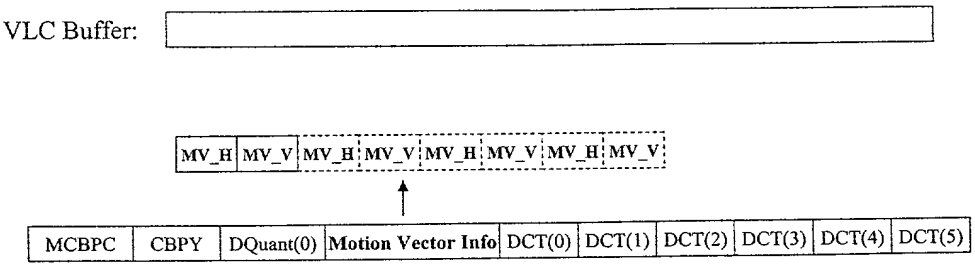


FIG. 4A

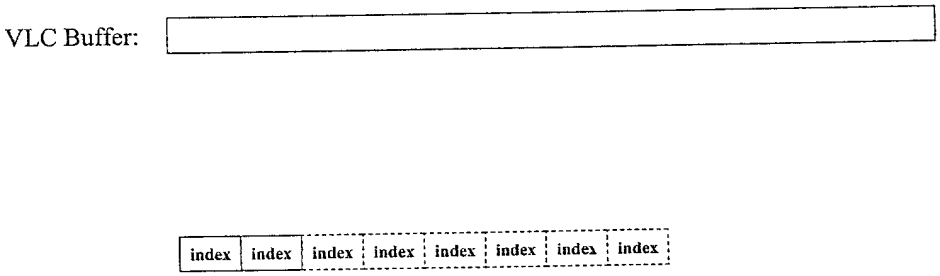


FIG. 4B

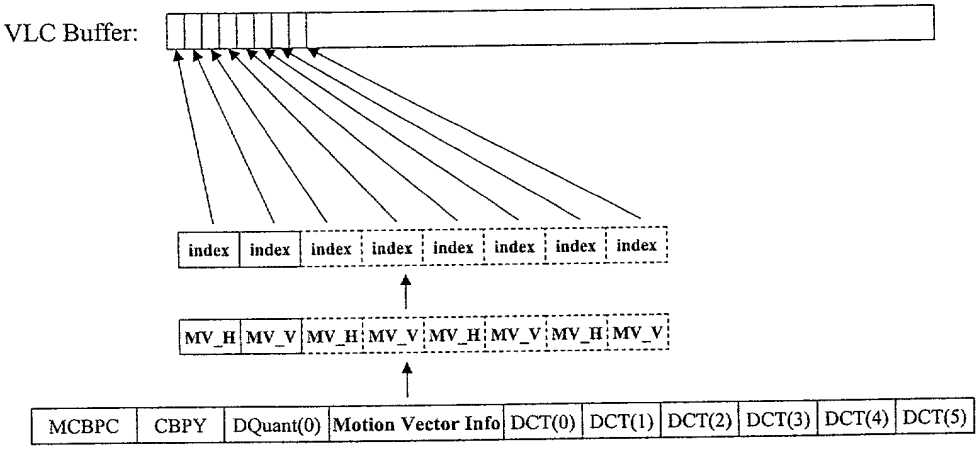


FIG. 4C

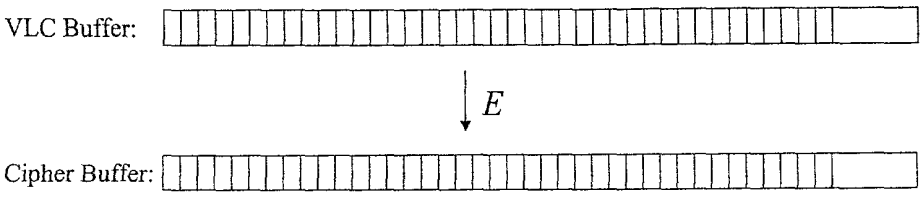
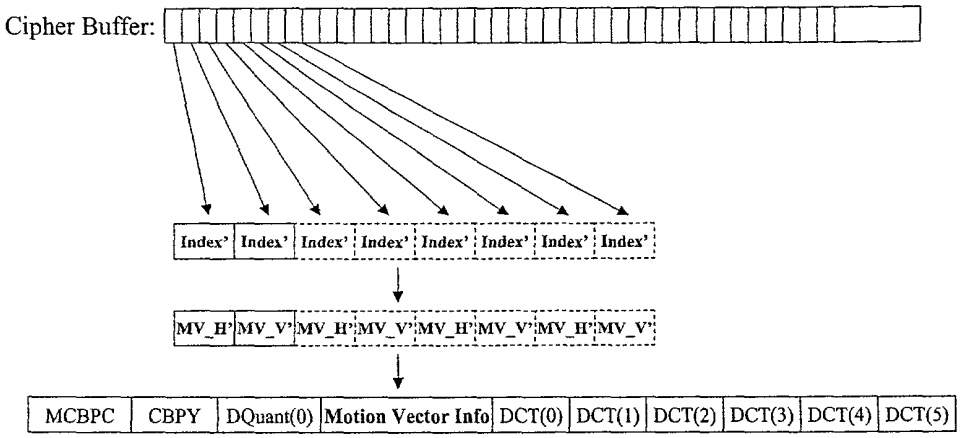
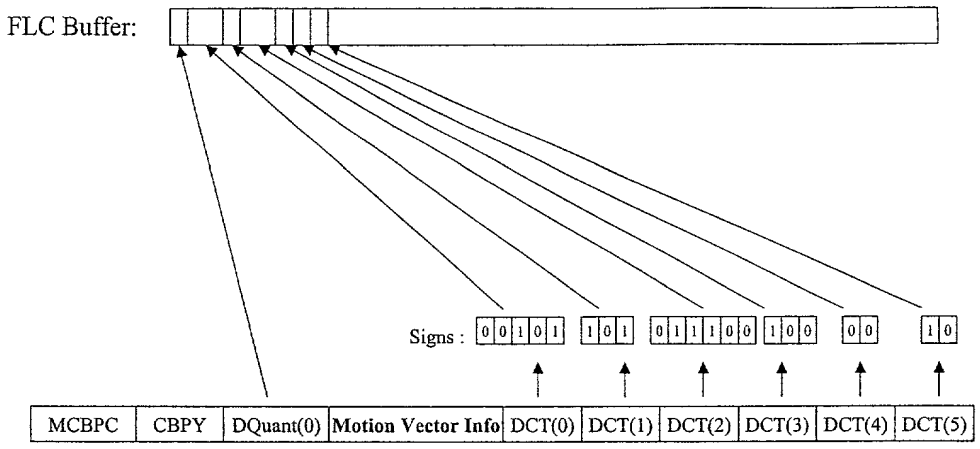


FIG. 4D



Macroblock 0

FIG. 4E



Macroblock 0

FIG. 6A

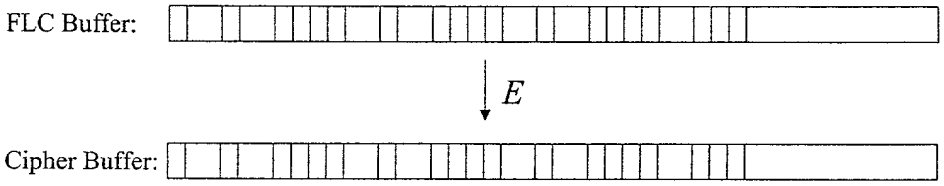
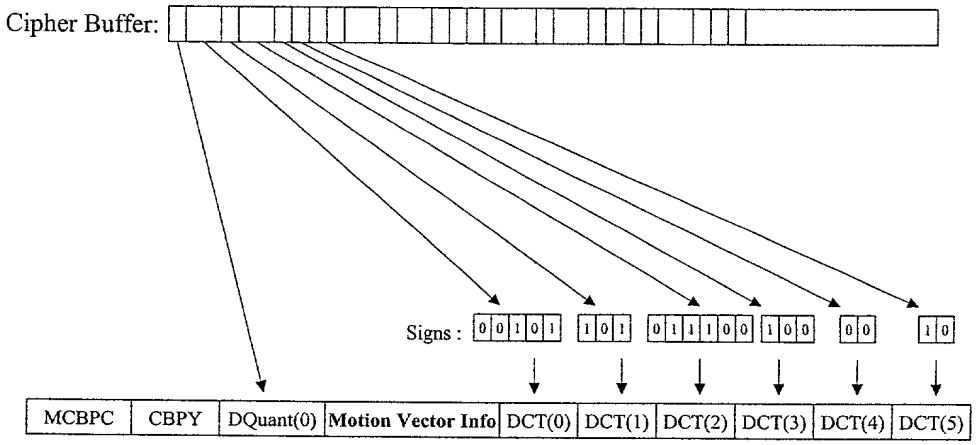


FIG. 6B



Macroblock 0

FIG. 6C

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